WO 2005/064341 PCT/EP2004/014814

FIGURE 1a

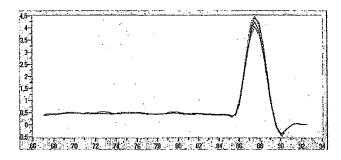


FIGURE 1b

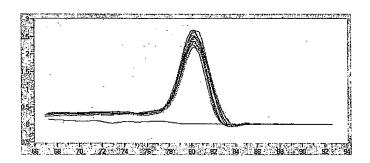


FIGURE 2

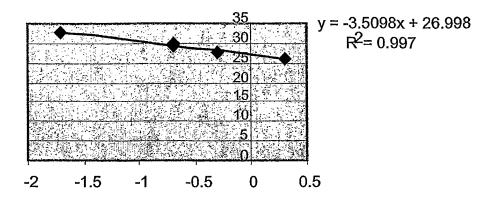
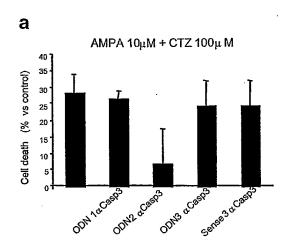


FIGURE 3



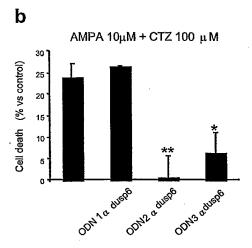


FIGURE 4

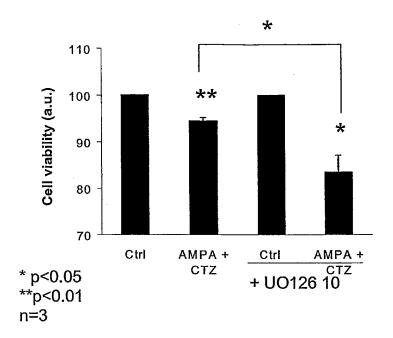


FIGURE 5

| | % ident: 875:189 | | .783% ungap | ped) in 17 | 16 nt over | lap | |
|--|--|---|---|--|---|--|---|
| human | | 150 BAGCCAG | 160 CGCTGCAGCTG | 170 GTGCAGAGAG | 180 | 190 'ጥጥጥር አርጥጥር ባ | 200 פרוביים |
| | | | | :::: | : : : | ::: ::::: | : ::: |
| rat | GATTCA: 160 | TTGACTC | rgagagtgatc 180 | TGGTGCAGAG 190 | GGACCACCGG 200 | CTTGGCTTCT 210 | rgtcg |
| h | - | 210 | 220 | 230 | 240 | 250 | 260 |
| human | TUTGUU | | CGCTAGCCTCG | | | ATTAAACCC(| |
| rat | | | CGCTAGCTTCG | | | ATCAAACCC | GCTCCG |
| | 220 | | | 40 | 250 | 260 | 270 |
| human | | 270 | 280 | 290 | 300 | 310 | 320 |
| human | | CACGIT | CGCGCGCGTG | | TGCCTGCCCC | | |
| rat | | | CTCACGGCTTG | C-TTGGCCTA | TGCCTGCCTC | GAGGGGCGT | CTGCTAG |
| | | 280 | 290 | 300 | 310 | 320 | |
| | | 330 | 340 | 350 | 360 | 370 | 380 |
| human | | | FCCCGCAGCTC | | | | |
| rat | GCACCC | CGCCTTC' | ::: ::::::: FCCTGCAGCTC | GACCCCCATG | ::::::::::: ЭТАСАТАССТА | יייראבארררביי | :::::: GCCCTT |
| | 30 | 340 | 350 | 360 | 370 | 380 | . 500011 |
| | | 390 | 400 | 410 | 420 | 430 | 440 |
| human | | | GCGATCAGCAA | | | | |
| rat | | | :::::::::::::::::::::::::::::::::::::: | | | | |
| | 90 | 400 | 410 | 420 | 430 | 440 | 1901999 |
| | | 450 | 460 | 470 | 480 | 490 | 500 |
| human | CAACGA | GCGGCTG(| CTGCTGATGGA | CTGCCGGCCG | CAGGAGCTAT | ACGAGTCGT | CGCACAT |
| rat | CAACGA | ACAGCTG | :::::::: CTGCTGATGGA | CTGCCGACCG | CAGGAGCTGT | 'ACGAGTCGT | : : : : : : 'ርርልርልሞ |
| 4 | 50 | 460 | 470 | 480 | 490 | 500 | 20010211 |
| | | 510 | 520 | 530 | 540 | 550 | 560 |
| human | | | AACGTGGCCAT | | | | |
| | | PGCCATC | ::::::::: AACGTGGCCAT | CCCGGGCATC | T.T.T.T.T.T.T.T.T.T.T.T.T.T.T.T.T.T.T. | | GCCCNN |
| rat | CGAATC. | | | | ATTAC TO A TACA | (2) Pr (1) (2) (2) (2) (2) | |
| | 10 | 520 | 530 | 540 | 550 | GTCTGCAGAA 560 | ACCOCAL |
| 5 | 10 | 520 570 | 530 580 | 540 590 | 550 600 | 560 610 | 620 |
| 5 | 10 CCTGCC | 520 570 GGTGCGC | 530 580 GCGCTCTTCAC | 540 590 GCGCGGCGAG | 550 600 GACCGGGACC | 560 610 GCTTCACCC | 620 GCGCTG |
| 5 human | CCTGCCC | 520 570 GGTGCGC | 530 580 GCGCTCTTCAC | 540 590 GCGCGGCGAG | 550 600 GACCGGGACC | 560 610 GCTTCACCC | 620 GCGCTG |
| human rat | CCTGCCC | 520 570 GGTGCGC | 530 580 GCGCTCTTCAC | 540 590 GCGCGGCGAG | 550 600 GACCGGGACC | 560 610 GCTTCACCC | 620 GCGCTG |
| 5 human rat | CCTGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | 520 570 GGTGCGCG ::::::: GGTGCGCG 580 630 | 530 580 GCGCTCTTCAC ::::::::::::::::::::::::::::::: | 540 590 GCGCGGCGAG :::::::: GCGCTGCGAG 600 650 | 550 600 GACCGGGACC ::::::::: GACCGGGACC 610 660 | 560 610 GCTTCACCCC :::: ::: : GCTTTACCAC 620 670 | 620 GGCGCTG :::::: GGCGCTG 680 |
| 5 human rat | CCTGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | 520 570 GGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC | 530 580 580 GCGCTCTTCAC ::::::::: GCGCTATTCAC 590 640 GTGGTGCTCTA | 540 590 GCGCGGCGAG ::::::::: GCGCTGCGAG 600 650 CGACGAGAGAG | 550 600 GACCGGGACC GACCGGGACC 610 660 AGCAGCGACC | 560 610 GCTTCACCCC :::::::::::::::::::::::::::::: | 620 GGCGCTG :::::: GGCGCTG 680 ATACGGG |
| 5 human rat 5 human | CCTGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | 520 570 GGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC | 530 580 580 GCGCTCTTCAC ::::::::::::::::::::::::::::::: | 540 590 GCGCGGCGAG ::::::::: GCGCTGCGAG 600 650 CGACGAGAGC | 550 600 GACCGGGACC GACCGGGACC 610 660 AGCAGCGACC | 560 610 GCTTCACCCC :::::::::::::::::::::::::::::: | 620 GGCGCTG :::::: GGCGCTG 680 ATACGGG |
| 5 human rat 5 human rat | CCTGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC | 520 570 GGTGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGCGC | 530 580 580 GCGCTCTTCAC ::::::::: GCGCTATTCAC 590 640 GTGGTGCTCTA | 540 590 GCGCGGCGAG ::::::::: GCGCTGCGAG 600 650 CGACGAGAGC | 550 600 GACCGGGACC GACCGGGACC 610 660 AGCAGCGACC | 560 610 GCTTCACCCC :::::::::::::::::::::::::::::: | 620 GGCGCTG :::::: GGCGCTG 680 ATACGGG |

| | | 690 | 700 | 710 | 720 | 730 | 740 |
|-------------------------------------|--|--|---|--|---|---|--|
| numan | 1 CGG | CGAGTCGTTGC | PCGGGCTGCT | GCTCAAGAAG | GCTCAAGGACG | AGGGCTGCCC | GGCGTT |
| | | | | | | | |
| at | 166. 690 | AGAGTCGGTCC' | rcgggergel 710 | 'GC'I'CAAGAAA 720 | | | GGCGTT |
| | 090 | 700 | 710 | 720 | 730 | 740 | |
| | | 750 | 760 | 770 | 780 | 790 | 800 |
| numar | 1 CTA | CCTGGAAGGTG | GCTTCAGTA | GTTCCAAGCC | CGAGTTCTCCC | TGCATTGCG | AGACCAA |
| | | ::: ::::::: | | | | | |
| rat | | CCTTGAAGGTG | | | | | AGACCAA |
| | 750 | 760 | 770 | 780 | 790 | 800 | |
| | | 810 | 820 | 830 | 840 | 850 | 860 |
| numar | 1 TCT. | AGACGGCTCGT | | | | | |
| | ::: | :::::::::: | : ::::::: | | :::::::: | :::: ::::: | :::::: |
| cat | | AGACGGCTCGT | | | | | GGGCCI |
| | 810 | 820 | 830 | 840 | 850 | 860 | |
| | | 870 | 880 | 890 | 900 | 910 | 920 |
| humar | n GCG | GATCAGCTCTG | | | | | |
| | | | | | | | |
| cat | | GATCAGCTCCG. | ACTCTTCCTC | CGGACATTGAC | STCTGACCTTG | ACCGAGACC | CCAATAG |
| | 870 | 880 | 890 | 900 | 910 | 920 | |
| | | 930 | 940 | 950 | 960 | 970 | 980 |
| humar | TCC | | | 200 | 200 | 310 | 200 |
| | | AACAGAC I CGG | ATGGTAGTCC | CGCTGTCCAAC | CAGCCAGCCTT | CCTTCCCAG | rggagan |
| | | AACAGACTCGG | | | CAGCCAGCCTT | | |
| | ::: TGC | ::: :::::: AACGGACTCCG | :::: ::: ATGGCAGCC | CGCTGTCCAAC | | ::::::::::::::::::::::::::::::::::::::: | :::::: |
| | ::: | ::: ::::: : | :::: :: :: | | | ::::::::::::::::::::::::::::::::::::::: | :::::: |
| | ::: TGC | AACGGACTCCG 940 | :::: ::: ATGGCAGCC0 950 | CGCTGTCCAAC | CAGCCAGCCTT 970 | CCTTCCCGG | rggaga1 |
| rat | ::: TGC 930 | ::: ::::: : AACGGACTCCG. 940 | :::: :: :: ATGGCAGCCC 950 1000 | CGCTGTCCAAC 960 1010 | CAGCCAGCCTT 970 | :::::::::::::::::::::::::::::::::::::: | :::::: FGGAGAT |
| rat | ::: TGC 930 | AACGGACTCCG 940 | ETTE ETTE ETTE ETTE ETTE ETTE ETTE ETT | CGCTGTCCAAC 960 1010 STGCCAAAGAC | CAGCCAGCCTT 970 1020 CTCCACCAACT | CCTTCCCGG 980 1030 TGGACGTGT | FGGAGAT 1040 1GGAGG |
| rat numar | TGC 930 CTT | :::::::::::::::::::::::::::::::::::::: | ETTE TO THE TOTAL TO THE T | CGCTGTCCAAC 960 1010 STGCCAAAGAC | CAGCCAGCCTT 970 1020 CTCCACCAACT | CCTTCCCGG 980 1030 TGGACGTGT | FGGAGAT 1040 FGGAGG |
| rat numar | TGC 930 CTT | :::::::::::::::::::::::::::::::::::::: | ETTE TO THE TOTAL TO THE T | CGCTGTCCAAC 960 1010 STGCCAAAGAC | CAGCCAGCCTT 970 1020 CTCCACCAACT | CCTTCCCGG 980 1030 TGGACGTGT | FGGAGAT 1040 FGGAGG |
| rat humar | ::: TGC 930 CTT :: TTT | AACGGACTCCG 940 990 GCCCTTCCTCT GCCCTTCCTTT 1000 | HILL HELD HELD HELD HELD HELD HELD HELD HE | GCTGTCCAAC 960 1010 STGCCAAAGAC ETGCCAAAGAC 1020 | CAGCCAGCCTT 970 1020 CTCCACCAACT :::::::: CTCTACTAACT 1030 | CCTTCCCGG 980 1030 TGGACGTGT :::::::::::::::::::::::::::::::::: | TGGAGAT 1040 TGGAGGA TGGAAGA |
| cat numar cat | ::: TGC 930 | ### 1000 ### 1050 | :::::::::::::::::::::::::::::::::::::: | CGCTGTCCAAC 960 1010 ETGCCAAAGAC ETGCCAAGGAC 1020 1070 | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::::::::::::::::::: | CCTTCCCGG 980 1030 TGGACGTGT ::::::::: TGGACGTGT 1040 1090 | TGGAGAT 1040 TGGAGGAT TGGAAGAT TGGAAGAT TGGAAGAT |
| rat numar rat | ::: TGC 930 | ### 1050 ### 10 | ###################################### | CGCTGTCCAAC 960 1010 ETGCCAAAGAC :::::::::::::::::::::::::::::: | CAGCCAGCCTT 970 1020 CTCCACCAACT :::::::::::::::::::::::::: | CCTTCCCGG 980 1030 TGGACGTGT :::::::: TGGACGTGT 1040 1090 ATCTCTTTG | 1040 FGGAGAT FGGAGGA FFGGAAGA 1100 AGAACGO |
| rat numar rat numar | ::: TGC 930 | ### 1000 ### 1050 | :::::::::::::::::::::::::::::::::::::: | CGCTGTCCAAC 960 1010 ETGCCAAAGAC 1020 1070 ACGTCACCCC | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::: CTCTACTAACT 1030 1080 CAATTTGCCGA | 1030 1030 TGGACGTGT 1040 1090 AATCTCTTTGG | 1040 IGGAGAT IGGAGGAGAT IGGAAGAT IGGAAGAT IGGAAGAT |
| rat humar rat humar | ::: TGC 930 | AACGGACTCCG 940 990 GCCCTTCCTCT 1000 1050 CGGCATCAAGT | :::::::::::::::::::::::::::::::::::::: | CGCTGTCCAAC 960 1010 ETGCCAAAGAC 1020 1070 ACGTCACCCC | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::: CTCTACTAACT 1030 1080 CAATTTGCCGA | 1030 1030 TGGACGTGT 1040 1090 AATCTCTTTGG | TGGAGAT 1040 TGGAGGA TGGAAGA 1100 AGAACGC |
| rat humar rat humar | ::: TGC 930 :: TTT 990 ATT :: GTT | ### 1000 ### 1000 ### 1000 ### 1000 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 ### 1050 | ATGGCAGCCC 950 1000 ACTTGGGCTC 1010 1060 ACATCTTGAACATCTTGAACATCTTGAAACATCTTGAAAACATCTTGAAAACATCTTGAAAACATCTTGAAAACATCTTGAAAACATCTTGAAAACATCTTGAAAACATCTTGAAAAACATCTTGAAAAACATCTTGAAAAAAAA | DESCRIPTION OF THE PROPERTY OF | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::: CTCTACTAACT 1030 1080 CAATTTGCCGA :::::::::::::::::::::::::::::::::: | 1030 1030 TGGACGTGT 1040 1090 AATCTCTTTG 1100 | TGGAGAT 1040 TGGAGG TGGAAGA 1100 AGAACG AGAATG |
| rat numar rat numar rat | ::: TGC 930 CTT :: TTT 990 ATT :: GTT | ### 1000 ### 1000 ### 1000 ### 1000 ### 1050 ### 10 | ### 120 | 1010 1010 ETGCCAAGGAC 1020 1070 ACGTCACCCC 1080 1130 | CAGCCAGCCTT 970 1020 CTCCACCAACT CTCTACTAACT 1030 1080 CAATTTGCCGA CAATCTGCCCA 1090 1140 | 1030 1030 1030 1030 1030 1030 1090 1090 | 1040 TGGAGAT 1040 TGGAGGA TGGAAGA 1100 AGAAACGC TGGAATGC |
| rat humar rat humar | ::: TGC 930 CTT :: TTT 990 ATT :: GTT 1050 | ### 110 | ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 ### 120 | 1010 1010 ETGCCAAGGAC 1020 1070 ACGTCACCCC 1080 1130 | CAATCTGCCA 140 1020 TTCCACCAACT 1030 1080 CAATTTGCCGA 1090 1140 GGATCACTGGA | 1030 TGGACGTGT 1040 1090 AATCTCTTTG 1100 1150 AGCCAAAACC | 1040 FGGAGAT 1040 FGGAGGAT FGGAAGAT 1100 AGAACGC FFGAAGAT AGAATGC 1160 TGTCCCZ |
| rat humar rat humar | ::: TGC 930 1 CTT :: TTT 990 1 ATT :: GTT 1050 | ### Company | ATGGCAGCCC 950 1000 ACTTGGGCTC 1010 1060 ACATCTTGAI 1070 1120 ACAAGCAAAA | CGCTGTCCAAC 960 1010 ETGCCAAAGAC 1020 1070 ACGTCACCCCC 1080 1130 | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::::::::::::::::::::: | CCTTCCCGG 980 1030 TTGGACGTGT 1040 1090 ATCTCTTTG LICE ATCTGTTTG 1100 1150 AGCCAAAACCC | TGGAGAT 1040 TGGAGGA TGGAAGA 1100 AGAACGO HAGAACGO 1160 TGTCCCA |
| rat numar rat numar rat j | ::: TGC 930 1 CTT :: TTT 990 1 ATT :: GTT 1050 | ### 110 | ATGGCAGCCC 950 1000 ACTTGGGCTC 1010 1060 ACATCTTGAI 1070 1120 ACAAGCAAAA | CGCTGTCCAAC 960 1010 ETGCCAAAGAC 1020 1070 ACGTCACCCCC 1080 1130 | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::::::::::::::::::::: | CCTTCCCGG 980 1030 TTGGACGTGT 1040 1090 ATCTCTTTG 1100 1150 AGCCAAAACC | TGGAGAT 1040 TGGAGGA TGGAAGA 1100 AGAACGO HAGAACGO 1160 TGTCCCA |
| rat humar rat humar rat humar | ::: TGC 930 CTT :: TTT 990 ATT :: GTT 1050 AGG | AACGGACTCCG 940 990 GCCCTTCCTCT 1000 1050 CGGCATCAAGT 1060 1110 AGAGTTTAAAT GGAGTTCAAGT 1120 | ###################################### | CGCTGTCCAAC 960 1010 ETGCCAAAGAC 1020 1070 ACGTCACCCCC 1080 1130 FCCCCATCTCC | CAGCCAGCCTT 970 1020 TTCCACCAACT :::::::::::::::::::::::::: | CCTTCCCGG 980 1030 TTGGACGTGT 1040 1090 ATCTCTTTG LICE ATCTGTTTG 1100 1150 AGCCAAAACCC | 1040 TGGAGGA TGGAAGA 1100 AGAACGO SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS |
| rat humar rat j humar j | ::: TGC 930 1 CTT :: TTT 990 1 ATT :: GTT 1050 1 AGG ::: AGG | ### STANDARD ### S | ### ################################## | CGCTGTCCAAC 960 1010 ETGCCAAAGAC 1020 1070 ACGTCACCCCC 1080 1130 ECCCCATCTCC 1140 1190 | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::::::::::::::::::: | 1030 1030 1030 1030 1030 1030 1030 1030 | 1040 TGGAGAT TGGAGGA TGGAAGAT TGGAAGAT TGGAAGAT TGGAAGGAT TGGAATGC TGTCCCAT TGTCCCAT TGTCCCAT TGTCCCAT |
| rat rumar rat j | ::: TGC 930 1 CTT :: TTT 990 1 ATT :: GTT 1050 1 AGG :: AGG 1110 | ### STATE | ### ### ### ### ### ### ### ### ### ## | CGCTGTCCAAC 960 1010 ETGCCAAAGAC 1020 1070 ACGTCACCCCC 1080 1130 ECCCCATCTCC 1140 1190 ECATAGATGAE | CAGCCAGCCTT 970 1020 CTCCACCAACT ::::::::: CTCTACTAACT 1030 1080 CAATTTGCCGA :::::::::::::::::::::::::::::::::: | 1030 1030 1030 1030 1030 1030 1030 1030 | 1040 TGGAGAT TGGAGGA TGGAAGA TGGAAGA TGGAAGG TGTCCCA |
| rat humar trat humar trat | ::: TGC 930 n CTT :: TTT 990 n ATT :: GTT 1050 n AGG ::: AGG 1110 | ### STANDARD ### S | ### ### ### ### ### ### ### ### ### ## | 1010 FTGCCAAGAC 1020 1070 ACGTCACCCC 1080 1130 FCCCCATCTCC 1140 1190 FCATAGATGA | CAGCCAGCCTT 970 1020 TTCCACCAACT :::::::::: TTCTACTAACT 1030 1080 CAATTTGCCGA ::::::::::: CAATCTGCCCA 1090 1140 GGATCACTGGA ::::::::::::::::::::::::::::::::::: | 1030 TGGACGTGT 1040 1090 AATCTCTTTGA 1100 1150 AGCCAAAACC 1160 1210 AAGAACTGTG 1210 AAGAACTGTGG 1210 AAGAACTGTGG 1210 AAGAACTGTGG | 1040 TGGAGAI TGGAGGI TGGAAGI T |

| | | 1220 | 1040 | 1250 | 1060 | 1070 | 1000 |
|---|--|--|---|--|--|--|---|
| າເມາລາ | GGTAC | 1230 ATTGCTTGG | 1240 СТСССАТТА | 1250 CCGCTCAGT | 1260 CACTGTGACT | 1270 ምርርርምየልዮር | 1280 ጥጥልጥራር ል |
| · | | | | | ::: ::::: | | |
| at | | | | | CACGGTGACA | | |
| 12: | | 1240 | 1250 | 1260 | 1270 | 1280 | |
| | | | | | | | |
| | | 1290 | 1300 | 1310 | 1320 | 1330 | 1340 |
| uman | | | | | CATTGTCAAA | | |
| | ::::: | | | | ::::::::: | | |
| at | | | | | CATTGTCAAA | | CCAACAT |
| 12 | 90 | 1300 | 1310 | 1320 | 1330 | 1340 | |
| | | 1350 | 1360 | 1370 | 1380 | 1390 | 1400 |
| uman | ል ሞሮሮር | | | | GGACTTCGAG | | 1400 CACTCAC |
| anan | | | | | ::::::::: | | |
| at | CTCTC | CCAACTTCA | ACTTCATGG | GCCAGCTGCT | TGACTTTGAA | AGGACCCTGG | GACTCAC |
| 13. | | 1360 | 1370 | 1380 | 1390 | 1400 | 01101 0110 |
| | | | | | | | |
| | | 1410 | 1420 | 1430 | 1440 | 1450 | 1460 |
| uman | | | | | GCTGTATTTT | | |
| | | | | | ::: :: :: | | |
| | | | | | GCTCTACTTC | | CCAACCA |
| 14 | 10 | 1420 | 1430 | 1440 | 1450 | 1460 | |
| | | 1470 | 1480 | 1490 | 1500 | 1510 | 1500 |
| | | | | 1490 | 1500 | 1510 | 1520 |
| uman | | | | | GTGAAAGACC | | |
| numan rat 14 | GAATG | : ::::: : | | :::::::: | GTGAAAGACC :::::::: GTGAAAGGCA 1510 | :: :::: : | ::: :: |
| at | ::::: GAATG 70 | : ::::: : TCTACCAAG 1480 1530 | ETTGGACTCCC 1490 1540 | :::::::::::::::::::::::::::::::::::::: | :::::::::::::::::::::::::::::::::::::: | :: :::: : CC-CACCTTT 1520 1570 | ::: :: CCTAGCO |
| cat | ::::: GAATG 70 | : ::::: : TCTACCAAG 1480 1530 | ETTGGACTCCC 1490 1540 | :::::::::::::::::::::::::::::::::::::: | :::::::::::::::::::::::::::::::::::::: | :: :::: : CC-CACCTTT 1520 1570 | ::: :: CCTAGCO |
| at 14 uman | GAATG GAATG 70 GGAAT | : ::::: : TCTACCAAG 1480 1530 GTGTCTGGG | ETGGACTCCC 1490 1540 CCCTTCAGCA | IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII | :::::::::::::::::::::::::::::::::::::: | :::::::::::::::::::::::::::::::::::::: | :::::: CCTAGCC |
| at 14 uman at | GAATG | : ::::: : TCTACCAAG | TTGGACTCCC 1490 1540 CCCTTCAGCA CATTCCTTCA | IGCAATCTAC 1500 1550 GTTTCTCTT- | GTGAAAGGCA 1510 1560 GGCAGCATCA GGCAGCATCG | :::::::::CC-CACCTTT 1520 1570 SCTGGGCTGC ::::::: | :::::: CCTAGCC TTTCTTT :::::: |
| at 14 uman | GAATG GAATG 70 GGAAT | : ::::: : TCTACCAAG 1480 1530 GTGTCTGGG | TTGGACTCCC 1490 1540 CCCTTCAGCA CATTCCTTCA | IGCAATCTAC 1500 1550 GTTTCTCTT- | GTGAAAGGCA 1510 1560 GGCAGCATCA GGCAGCATCG | :::::::::CC-CACCTTT 1520 1570 SCTGGGCTGC ::::::: | :::::: CCTAGCC |
| at 14 numan at 1 | GAATG GGAAT GGAAT ::: GGGA- | : :::::::::::::::::::::::::::::::::::: | ETGGACTCCC 1490 1540 CCCTTCAGCA ETTCCTTCA | ###################################### | ###################################### | :::::::::::::::::::::::::::::::::::::: | :::::: CCTAGCC TTTCTTT :::::: |
| at 14 numan rat 1 | GAATG GGAAT GGGAAT GGGA- 530 | : ::::: :: TCTACCAAG 1480 1530 GTGTCTGGG :::::: :: GTGTCT(154 | 1540 1540 CCCTTCAGCA : : :: CATTCCTTCA 10 15: | ###################################### | ###################################### | :::::::::::::::::::::::::::::::::::::: | ::: :: CCTAGCC TTTCTTT ::::::: TTTCTTT 80 |
| at 14 numan rat 1 | GAATG GGAAT GGGAT GGGAT GGGAT GGGGAT GGGGGAT GGGGGGGG | : ::::: :: TCTACCAAG 1480 1530 GTGTCTGGG :::::: :: GTGTCT(154) 1590 TGGCCCCAG | 1540 1540 CCCTTCAGCA: : : :: CATTCCTTCA: 10 15: | ###################################### | GTGAAAGGCA 1510 1560 GGCAGCATCA GGCAGCATCG 60 15 1620 CTGTCTGTAC | :::::::::::::::::::::::::::::::::::::: | CCTAGCO TTTCTTT :::::: TTTCTTT 80 |
| at 14 uman at 1 15 uman | GAATG GGAAT GGGAAT GGGA GGGA GGGGA GGGGG GGGGG GGGGG GGGGGG | : :::::::::::::::::::::::::::::::::::: | TEGGACTCCC 1490 1540 CCCTTCAGCA : : : :: CATTCCTTCA 10 15: 1600 GGTGTC-AAA | IGCAATCTAC 1500 1550 GTTTCTCTT- GTTTCTCTTG 50 1610 ATGACACCAG | GTGAAAGGCA 1510 1560 GGCAGCATCAG GGCAGCATCGG 60 15 1620 CTGTCTGTAC | 1570 1570 1570 3CTGGGCTGC : ::::: ACCAGGCTGC 70 15 | CCTAGCO TTTCTTT TTTCTTT 80 TACCAAG |
| at 14 uman at 1 15 uman | GAATG GGAAT GGGAAT GGGA GGGA GGGGA GGGGG GGGGG GGGGG GGGGGG | : :::::::::::::::::::::::::::::::::::: | TEGGACTCCC 1490 1540 CCCTTCAGCA CATTCCTCA 10 1600 GGTGTC-AAA | IGCAATCTAC 1500 1550 GTTTCTCTTT- IGTTCTCTTG 50 1610 ATGACACCAG | GTGAAAGGCA 1510 1560 GGCAGCATCA GGCAGCATCG 60 15 1620 CTGTCTGTAC | 1570 1570 1570 3CTGGGCTGC 1570 3CCAGGCTGC 1570 1630 1AGACAAGGT | CCTAGCO |
| eat 14 numan eat 1 | GGAAT GGGAAT GGGAAT S30 GGGAAT GGGGA GGGGA GGGGG GGGGGGGGGGGG | : :::::::::::::::::::::::::::::::::::: | TEGGACTCCC 1490 1540 CCCTTCAGCA CATTCCTCA 10 1600 GGTGTC-AAA | IGCAATCTAC 1500 1550 GTTTCTCTTT- IGTTCTCTTG 50 1610 ATGACACCAG | GTGAAAGGCA 1510 1560 GGCAGCATCA GGCAGCATCG 60 1620 CTGTCTGTAC CTGTCTGTAT | 1570 1570 1570 3CTGGGCTGC 1570 3CCAGGCTGC 1570 1630 1AGACAAGGT | CCTAGCO TTTCTTT SO TACCAAC |
| at 14 auman rat 15 auman rat | GGAAT GGGAAT GGGAAT GGGGA- 530 80 GTGTG GTGTG 1590 | : :::::::::::::::::::::::::::::::::::: | 1540 1540 CCCTTCAGCA : : : :: CATTCCTTCA 10 15: 1600 GGTGTC-AAA: 10 1600 | ### CONTRICT OF THE PROPERTY O | :::::::::::::::::::::::::::::::::::::: | :::::::::::::::::::::::::::::::::::::: | TTTCTTT STTCTTT TTTCTTT TTCTTT TTCTATO TACCAAC TGCCAAC 40 1690 |
| at 14 uman at 15 uman at 1 | GGAAT GGGAAT GGGAAT GGGGA GTGTG GTGTG 1590 640 TGCGG | : ::::: :: TCTACCAAG 1480 1530 GTGTCTGGC ::::: :: GTGTCTC 154 1590 TGGCCCCAG 160 1650 AATTGGTTI | 1540 1540 CCCTTCAGCA : : : :: CATTCCTTCA 10 15: 1600 GGTGTC-AAA: :: : : :: EGTGTCAAAA: 00 16: 1660 AATACTAACA | ### CONTREMENT C | ### CTCCATTC | :::::::::::::::::::::::::::::::::::::: | TTTCTTT STTCTTT TTTCTTT TTCTTT TTCTATO TACCAAC TGCCAAC 40 1690 |
| at 14 uman at 15 uman at uman at uman | GGAAT GGGAAT GGGAAT GGGGA GTGTG GTGTG 1590 640 TGCGG | : ::::: :: TCTACCAAG 1480 1530 GTGTCTGGC ::::: :: GTGTCTC 154 1590 TGGCCCCAG 160 1650 AATTGGTTI | 1540 1540 CCCTTCAGCA : : : :: CATTCCTTCA 10 15: 1600 GGTGTC-AAA: :: : : :: EGTGTCAAAA: 00 16: 1660 AATACTAACA | ### CONTRICT OF THE PROPERTY O | ### CTCCATTC | :::::::::::::::::::::::::::::::::::::: | TTTCTTT 80 TACCAAG 1690 AATAACA |
| at 14 uman at 15 uman at uman at uman | GGAAT GGGAAT GGGGA S30 GTGTG GTGTG 1590 640 TGCGG TGCGA | : :::::::::::::::::::::::::::::::::::: | 1540 1540 CCCTTCAGCA : : : :: CATTCCTTCA 10 | ### CONTREMENT C | CTCCATTCAT | :::::::::::::::::::::::::::::::::::::: | TTTCTTT :::::: TTTCTTT 80 TACCAAG :::::: TGCCAAG 40 1690 GATAACA ::::: CAAGGACA |
| at 14 uman 15 uman 15 uman 14 uman 1 | GGAAT GGGAAT GGGAAT GGGGA GTGTG GTGTG 1590 640 TGCGG | : :::::::::::::::::::::::::::::::::::: | 1540 1540 CCCTTCAGCA : : : :: CATTCCTTCA 10 | ### CONTREMENT C | ### CTCCATTC | :::::::::::::::::::::::::::::::::::::: | TTTCTTT SO TACCAAC TGCCAAC 1690 CATTACAC TGCAAC TGCAAC |
| tat 14 numan tat 15 numan tat | GGAATG GGGAATG GGGAATG GGGAATG GGGGAATG GGGGGAATG GGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGGAATG GGGGAATG GGGAATG GGGGAATG GGGGAATG GGGGAATG GGGGAATG GGGGAATG GGGGAATG GGGAATG GGGGAATG GGGAATG GGGGAATG GGGGAATG GGGGAATG GGGA | : :::::::::::::::::::::::::::::::::::: | 1540 1540 1540 CCCTTCAGCA : : : :: CATTCCTTCA 10 | ### Company | ### CTCCATTCAT** ************************** | :::::::::::::::::::::::::::::::::::::: | TTTCTTT 80 TACCAAC 1690 AATAACA AC AAGGACA |
| at 14 uman at 15 uman at 1 uman at | GGAATG GGGAATG GGGAATG GGGAATG GGGGAATG GGGGGG GTGTG GTGTG TGCGG TGCGG TGCGAATG TGCAATG TCCAATG TCCAAT | : :::::::::::::::::::::::::::::::::::: | 1540 1540 CCCTTCAGCA : : : : : : : : : : : : : : : : : : : | ### Company | :::::::::::::::::::::::::::::::::::::: | :::::::::::::::::::::::::::::::::::::: | TTTCTTT 80 TACCAAG 1690 AATAACA AAGGACI 00 |
| at 14 uman 15 uman 15 uman 14 uman 1 | GGAATG GGGAATG GGGAATG GGGAATG GGGGAATG GGGGGAATG GGGGGGGG | : :::::::::::::::::::::::::::::::::::: | 1540 1540 1540 CCCTTCAGCA : : :: CATTCCTTCA 1600 EGTGTC-AAA ::::::: EGTGTCAAAA 00 16 AATACTAACA ATTACGGAGGG 50 16 L710 AGATACAGGC | ### Company | ### 1560 ### 1560 ### 1560 ### 1560 ### 1560 ### 1620 ### 16 | :::::::::::::::::::::::::::::::::::::: | TTTCTTT 80 TACCAAG 1690 FAATAACA AGACAG 1750 GCCTACC |
| tat 14 tuman at 15 tuman at at tat at tat at tat tat | GAATG GGAAT GGAAT GGGA SO GTGTG CTGTG 1590 640 TGCGA 1650 17 GGACA :: : : | : :::::::::::::::::::::::::::::::::::: | 1540 1540 CCCTTCAGCA : : : :: CATTCCTTCA 1600 EGTGTC-AAA : : : : : 1660 AATACTAACA : : : : : ATTACGGAGG 60 16 L710 AGATACAGGC : : : : : | ### Company | :::::::::::::::::::::::::::::::::::::: | :::::::::::::::::::::::::::::::::::::: | TTTCTTT STTCTTT TTTCTTT TTCCTTT TTCCTTT TTCCTTT TTCCTTT TTCCAAC :::::: TGCCAAC 1690 CAATAAC ::::: CAAGGAC 00 1750 GCCTACC :::::: |

| | - | 1760 | 1770 | 1780 | 1700 | 1000 | |
|-------------|-------|-------------------|-------------------|--------------------|---|---------------------|---------|
| 1 | | | | | 1790 | 1800 | |
| human | CATG | CAGGGACTG | GATTCGAG | GACTTCCAG- | GCGCATAGG | GTAGAACCAA. | ATGATAG |
| | :: :: | ::::::: | : :: | : ::::: | : : :::: | : :: : | : : |
| rat | | | SACCTC | CATCCAGA | TAGAGGGTAGG | BACA-AAGGAG | CCGGG |
| 1 | 760 | 1770 | | 1780 | 1790 | 1800 | 1810 |
| 10 | 10 | 1000 | 1.000 | 1010 | 4050 | | |
| | 10 | 1820 | 1830 | 1840 | 1850 | 1860 | |
| human | GGTA | GGAGCATGT(| STTCTTTAG | GGCCTTGTAA | GGCTGTTTCCT | TTTGCATCTG | GAACTGA |
| | : :: | :::::::: | :::: :::: | :::: :: | ::::::::::::::::::::::::::::::::::::::: | :::::::: | :::: : |
| rat | GATA | GGAGCATGT | STTCCTTAG | GGCCACATAT | GGCTGTTTCCT | GTTGCATCTG | GAACCAA |
| | | | 1830 | 1840 | 1850 | 1860 | 1870 |
| | | 1820 | 1930 | 1040 | 1030 | 1000 | 1010 |
| 18 | 70 | 1820 1880 | 1890 | 1900 | 1910 | 1920 | 1070 |
| 18 human | | 1880 | 1890 | 1900 | | 1920 | |
| _ | | 1880 | 1890 | 1900 | 1910 | 1920 | |
| _ | CTAT | 1880 ATAATTGTC | 1890 FTCAAGTGA | 1900 AGACTAATTC | 1910 | 1920 ATAGAGGAGCC | AAAGAGA |

FIGURE 6

| 98.425 | % identity | (98.425 | 5% ungappe | d) in 381 a | aa overlap | (1-381:1-3 | 81) |
|------------|-------------------|---------|--------------------|----------------------|----------------------|--------------------|-----------|
| | 1.0 | | 20 | 20 | | F.O. | 60 |
| human | 10 MTDTTRPVPF | | 20 SKTVAWINEO | 30 Seegnerelee | 40 ADCR PORT, VES | 50 SSHIESAINVA | 60 |
| 11 CHICATI | | | | | | :::::::::: | |
| rat | | | | | | SHIESAINVA | |
| | 10 |) | 20 | 30 | .40 | 50 | 60 |
| | 70 | , | 80 | 0.0 | 100 | 110 | 100 |
| human | | | | 90 יינאיייטייניאי | 100 | 110 ENTGGESLLGI | 120 |
| - Tunion | | | | | | ::::::::: | |
| rat | | | | | | ENTGGESVLGI | |
| | 70 | } | 80 | 90 | 100 | 110 | 120 |
| | 1.20 | | 140 | 1.0 | 1.50 | * = 0 | 100 |
| human | 130 | | 140 SKEODEEST.H | 150 TETNINGSCS: | 160 333997.907.61 | 170 LGGLRISSDSS | 180 |
| 11 cancari | | | - | | | GGTVT22D25 | |
| rat | | | | | | LGGLRISSDSS | |
| | 130 |) | 140 | 150 | 160 | 170 | 180 |
| | 100 | | | | | | |
| human | 190 | | 200 PDI CNCODER | 210 | 220 | 230 /LEEFGIKYII | 240 |
| Human | | | ~ | | | PEEEGIVITI | |
| rat | | | | | | /LEEFGIKYII | |
| 1 | 190 |) | 200 | 210 | 220 | 230 | 240 |
| | 0.54 | | 0.50 | | | | |
| human | 250 | | 260 | 270 | 280 | 290 CGVLVHCLAGI | 300 |
| nanan | | | | | | GARAUCTVG | |
| rat | | | | | | CGVLVHCLAG | |
| | 250 |) | 260 | 270 | 280 | 290 | 300 |
| | 24 | | 200 | 200 | | | |
| human | 310 VTVTVAYLMO | | 320 | 330 Zantodnene | 340 | 350 | 360 |
| nanan | | | | | | :::::::::: | |
| rat | | | | | | LGLSSPCDNRV | |
| | 310 | | 320 | 330 | 340 | 350 | 360 |
| | 27/ | ` | 200 | | | | |
| human | 370 QLYFTTPSNO | | 380 ST.OST | | | | |
| 114444411 | QBIFITESKY | | _ | | | | |
| rat | QLYFTAPSNO | | | | | | |
| | 370 |) | 380 | | | | |

FIGURE 7

